

AMENDMENTS TO THE CLAIMS

1. (Currently amended) A process for invoking a method of a server object in a distributed application in a distributed data processing system, the process comprising the computer-implemented steps of:

executing a client object in a client that implements a first programming environment, said client object being written for executing said first programming environment;

executing a server object in a server that implements a second programming environment that is different from said first programming environment, said server object being written for said first programming environment;

~~executing said server object using an application that executes said first programming environment, such that said first programming environment is executing within said second programming environment;~~

executing said client object which begins an attempt to invoke a method in the server object;

in response to the client object beginning the attempt to invoke the method in the server object:

obtaining an object reference on the client for ~~a remote server object,~~
~~wherein said object reference executes~~ said second programming environment;
and

wrapping the object reference in an adapter, ~~wherein~~ which isolates the object reference ~~is isolated from~~ said client object ~~client code,~~ and

~~and wherein~~ the adapter performing ~~performs~~ data conversion between the object reference and the client object for different types of data;

calling by the client object the method in the server object, wherein said step of calling invokes a method of the adapter, ~~wherein~~ the method invoked in the adapter corresponding ~~corresponds~~ to the method called in the server object;

calling, by the method invoked in the adapter, a method in the object reference that corresponds to the method invoked in the adapter; and

calling, by the object reference, the method in the server object, wherein the adapter causes the object reference to invoke the method in the server object transparently to the client object such that the client object is unaware of the operation of the object reference; and

~~wherein said adapter isolates said client object from said second programming environment and isolates said object reference from said first programming environment.~~

2. (Original) The process of claim 1 wherein the adapter uses the object reference to invoke a method of a skeleton on the server.

3. (Original) The process of claim 1 wherein the skeleton invokes a method of a server object.

4. (Currently amended) A method for implementing a distributed application in a distributed data processing system, the method comprising the computer-implemented steps of:

executing a client object in a client that implements a first programming environment, said client object being written for ~~executing~~ said first programming environment;

executing a server object in a server that implements a second programming environment that is different from said first programming environment, said server object being written for said first programming environment;

~~executing said server object using an application that executes said first programming environment, such that said first programming environment is executing within said second programming environment;~~

in response to the client object beginning an attempt to invoke a method in the server object:

obtaining an object reference for ~~a proxy of the server object, wherein the object reference executes the second programming environment; and~~

wrapping the proxy in an adapter which isolates, ~~wherein the proxy is isolated~~
from the client object ~~client code~~, and ~~wherein the adapter performing~~ performs data
conversion between the proxy and the client object for different types of data; and
invoking a method of the adapter, wherein the adapter calls a corresponding
method in the proxy.

5. (Previously presented) The method of claim 4 wherein the adapter is a Java class
that implements an interface supported by the server object.

6. (Previously presented) The method of claim 4 wherein the server object is an
Enterprise JavaBean.

7. (Previously presented) The method of claim 4 wherein the object reference is
obtained from a naming service.

8. (Previously presented) The method of claim 4 wherein the proxy is a Common
Object Request Broker Architecture (CORBA) proxy.

9. (Original) The method of claim 8 wherein the adapter calls a method of the CORBA
proxy.

10. (Original) The method of claim 8 wherein the CORBA proxy is a Java class residing
on a client computer.

11. (Original) The method of claim 8 wherein the CORBA proxy passes the method
request to an object request broker.

12. (Currently amended) A data processing system for invoking a method of a server
object in a distributed application in a distributed data processing system, the data
processing system comprising:

execution means for executing a client object in a client that implements a first programming environment, said client object being written for executing said first programming environment;

execution means for executing a server object in a server that implements a second programming environment that is different from said first programming environment, said server object being written for said first programming environment;

~~execution means for executing said server object using an application that executes said first programming environment, such that said first programming environment is executing within said second programming environment;~~

execution means for executing said client object which begins an attempt to invoke a method in the server object;

in response to the client object beginning the attempt to invoke the method in the server object:

obtaining means for obtaining an object reference on the client for ~~a remote server object, wherein said object reference executes~~ said second programming environment; and

wrapping means for wrapping the object reference in an adapter which isolates ; ~~wherein the object reference is isolated from the client object client code, and wherein the adapter performing performs~~ data conversion between the object reference and the client object for different types of data;

calling means for calling by the client object the method in the server object which invokes a method of the adapter, ~~wherein the method invoked~~ in the adapter corresponding ~~corresponds~~ to the method called in the server object;

calling means for calling, by the method invoked in the adapter, a method in the object reference that corresponds to the method invoked in the adapter; and

calling means for calling, by the object reference, the method in the server object, wherein the adapter causes the object reference to invoke the method in the server object transparently to the client object such that the client object is unaware of the operation of the object reference; ~~and~~

~~wherein said adapter isolates said client object from said second programming environment and isolates said object reference from said first programming environment.~~

13. (Original) The data processing system of claim 12 wherein the adapter uses the object reference to invoke a method of a skeleton on the server.

14. (Original) The data processing system of claim 12 wherein the skeleton invokes a method of a server object.

15. (Currently amended) A data processing system for implementing a distributed application in a distributed data processing system, the data processing system comprising:

execution means for executing a client object in a client that implements a first programming environment, said client object being written for executing said first programming environment;

execution means for executing a server object in a server that implements a second programming environment that is different from said first programming environment, said server object being written for said first programming environment;

~~execution means for executing said server object using an application that executes said first programming environment, such that said first programming environment is executing within said second programming environment; and~~

in response to the client object beginning an attempt to invoke a method in the server object:

obtaining means for obtaining an object reference for ~~a proxy of the server object, wherein the object reference executes the second programming environment~~;

wrapping means for wrapping the proxy in an adapter which isolates, ~~wherein the proxy is isolated from the client object client code, and wherein the adapter performing performs~~ data conversion between the proxy and the client object for different types of data; and

invoking means for invoking a method of the adapter, wherein the adapter calls a corresponding method in the proxy.

16. (Original) The data processing system of claim 15 wherein the adapter is a Java class that implements an interface supported by the server object.

17. (Original) The data processing system of claim 15 wherein the server object is an Enterprise JavaBean.
18. (Original) The data processing system of claim 15 wherein the object reference is obtained from a naming service.
19. (Original) The data processing system of claim 15 wherein the proxy is a Common Object Request Broker Architecture (CORBA) proxy.
20. (Original) The data processing system of claim 19 wherein the adapter calls a method of the CORBA proxy.
21. (Original) The data processing system of claim 19 wherein the CORBA proxy is a Java class residing on a client computer.
22. (Original) The data processing system of claim 19 wherein the CORBA proxy passes the method request to an object request broker.
23. (Currently amended) A computer program product in a computer readable medium for use in a data processing system for invoking a method of a server object in a distributed application in the distributed data processing system, the computer program product comprising:
- instructions for executing a client object in a client that implements a first programming environment, said client object being written for ~~executing~~ said first programming environment;
 - instructions for executing a server object in a server that implements a second programming environment that is different from said first programming environment, said server object being written for said first programming environment;
 - ~~instructions for executing said server object using an application that executes said first programming environment, such that said first programming environment is executing within said second programming environment;~~

instructions for executing said client object which begins an attempt to invoke a method in the server object;

in response to the client object beginning the attempt to invoke the method in the server object:

instructions for obtaining an object reference on the client for ~~a remote server object, wherein said object reference executes~~ said second programming environment; and

instructions for wrapping the object reference in an adapter which isolates ; ~~wherein the object reference is isolated from the client object~~ client code, and ~~wherein the adapter performing~~ performs data conversion between the object reference and the client object for different types of data;

instructions for calling by the client object the method in the server object which invokes a method of the adapter, ~~wherein the method invoked in the adapter~~ corresponding ~~corresponds~~ to the method called in the server object;

instructions for calling, by the method invoked in the adapter, a method in the object reference that corresponds to the method invoked in the adapter; and

instructions for calling, by the object reference, the method in the server object, wherein the adapter causes the object reference to invoke the method in the server object transparently to the client object such that the client object is unaware of the operation of the object reference; ~~and~~

~~wherein said adapter isolates said client object from said second programming environment and isolates said object reference from said first programming environment.~~

24. (Currently amended) A computer program product in a computer readable medium for use in a data processing system for implementing a distributed application in a distributed data processing system, the computer program product comprising:

instructions for executing a client object in a client that implements a first programming environment, said client object being written for ~~executing~~ said first programming environment;

instructions for executing a server object in a server that implements a second programming environment that is different from said first programming environment, said server object being written for said first programming environment;

~~instructions for executing said server object using an application that executes said first programming environment, such that said first programming environment is executing within said second programming environment;~~

in response to the client object beginning an attempt to invoke a method in the server object:

instructions for obtaining an object reference for a ~~proxy of the server object,~~ wherein the object reference executes the second programming environment;

instructions for wrapping the proxy in an adapter, ~~wherein~~ which isolates the proxy ~~is isolated~~ from the client object client code, and wherein the adapter performing ~~performs~~ data conversion between the proxy and the client object for different types of data; and

instructions for invoking a method of the adapter, wherein the adapter calls a corresponding method in the proxy.